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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/519,676

03/16/2005

Paul Swain

SWAI3001

5958

23364 7590 03/20/2008

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EXAMINER

GIBSON, ROY DEAN

ART UNIT

PAPER NUMBER

3739

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/519,676	<b>Applicant(s)</b> SWAIN ET AL.	
	<b>Examiner</b> Roy D. Gibson	<b>Art Unit</b> 3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7 and 9-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7 and 9-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/8/2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

Claim 10 is objected to because of the following informalities: in line 1, "35" should be deleted. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-7, 9, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zelickson et al. (6,073,052) in view of Edwards (6,002,968).

Zelickson et al. disclose an apparatus for heat ablation of the internal wall of organ an oesophagus, which apparatus comprises;

a catheter (12) having proximal and distal ends, and having at least one internal lumen;

a balloon(20) located at the distal end of the catheter and attached to a said lumen, whereby the balloon may be filled with a liquid from the proximal end of the catheter; a supply of a liquid for filling the balloon via the said lumen;

a tuned microwave antenna (14) located in the region of the balloon for radiating microwave energy at a predetermined frequency to heat the balloon to a temperature suitable for heat ablation of the hollow organ wall tissue;

a waveguide (34) for supplying microwave energy to the microwave antenna;  
and a temperature probe (an IR sensor that is well known in the art which comprises an optical fiber or see Edwards, col. 5, lines 10-30) to measure the temperature of the balloon; and a means for controlling the power supplied to the microwave antenna independence upon the temperature sensed by the temperature probe (Figure 1 and col. 1, lines 5-24, col. 2, line 50-col. 4, line 31 and col. 5, lines 12-27).

But, Zelickson et al. fail to specifically disclose: a former to centralize the antenna; wherein the liquid has a dielectric constant of from 41 to 63 and a conductivity of from 1.0 Sm<sup>-1</sup> to 1.5 Sm<sup>-1</sup> at said frequency and 50° C; and wherein the liquid has a dielectric constant of from 47 to 57 at said frequency and 50 °C. or wherein the liquid has a conductivity of from 1.1 to 1.35 Sm<sup>-1</sup> at said frequency and 50° C. or wherein the balloon has a normal inflation diameter of from 16 to 22 mm.

Regarding the balloon diameter, because the application is the same, i.e., heating of the oesophagus by locating the microwave antenna within the balloon and placing the balloon adjacent the oesophagus, the diameter would obviously be in the same diameter range or 16-22 mm.

Regarding the former for centralizing the antenna, the examiner maintains that this is merely an engineering design choice as required by the structure of the catheter and antenna design.

Regarding the conductivity and dielectric constant of the inflation liquid, Edwards discloses a microwave applicator and that microwave energy emitted by the antenna

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causes optimum heating of the liquid and surrounding tissue if the liquid is an electrolyte or salt solution, and the parameters claimed above match those of a mild saline solution (col. 4, line 33-col. 5, line 9).

Therefore, at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the device of Zelickson et al. as taught by Edwards, to provide a liquid which optimizes the energy absorbed by the liquid from the antenna and whose parameters could be determined without undue experimentation and further to provide control means with temperature feedback to provide power as required to the microwave antenna.

Further to claims 9 and 10, Zelickson et al. the process essentially as claimed with the additional teachings of Edwards as detailed above.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roy D. Gibson whose telephone number is 571-272-4767. The examiner can normally be reached on Tu-Th, 7:30 am-4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on 571-272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy D. Gibson/  
Primary Examiner  
Art Unit 3739

March 17, 2008